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ABSTRACT

This report summarizes the activities and outcomes of a planning project responsible for delineating and determining priorities of crucial, researchable issues in teacher education. The following considerations were made: (1) What does research and development suggest for the content of preservice, induction, and inservice teacher education? (2) What are the present perspectives on the design and delivery of teacher education? (3) What does present research and theory say about teachers and teacher educators as learners? (4) How do the various roles and various substantive and process areas work interactively to design, deliver, and assess teacher education? (5) How do social, political, economic, and cultural realities affect teacher education and how can theory and research address these realities? (6) What are present strategies, promises, and limitations of research for contributing to the design, development, and evaluation of teacher education? and (7) How can research knowledge and products be shared collaboratively and effectively with constituent groups and how can practical application to improve real-world teacher education practice be facilitated? (JD)

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A NATIONAL AGENDA FOR RESEARCH AND DEVELOPMENT IN TEACHER EDUCATION 1979 - 1984

Gene E. Hall
Synthesis

Virginia Koehler
Preface

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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RESEARCH AND DEVELOPMENT AGENDA IN TEACHER EDUCATION

RESEARCH AND DEVELOPMENT CENTER FOR TEACHER EDUCATION
THE UNIVERSITY OF TEXAS AT AUSTIN

UTR&D

The research described herein was conducted under contract with the National Institute of Education. The opinions expressed are those of the authors and do not necessarily reflect the position or policy of the National Institute of Education, and no endorsement by the National Institute of Education should be inferred.

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Executive Summary

The increased national awareness of and concerns about issues in teacher education, combined with the impetus for all constituent role groups to collaborate in addressing those issues, led to the formation of the project, "Research and Development Agenda in Teacher Education" (R&DATE). The basic goal of the project was to delineate and prioritize crucial, researchable issues in teacher education through the development of a constituent- based national research agenda. In order to achieve that goal, two activities were carried out: (1) a National Planning Committee was established for the purpose of joint planning that included representatives from significant constituencies; and (2) an invitational conference, attended by researchers, practitioners, policy-makers, and other role group representatives, was held to collaboratively catalyze, synthesize, and prioritize the critical issues in teacher education research and development. The resultant recommendations represent a collective sense of the appropriate directions for research and development in teacher education for the next three to five years.

One basic perspective which encompasses the recommendations is: The setting of research priorities and the operationalization of those priorities into research activities should be planned and implemented from a multidimensional perspective. More specifically, the following parameters were identified:

1) Teacher education research should be carried out across the professional continuum --from preservice, to early inservice (induction), and throughout the inservice career.

2) The existing knowledge base should be formally analyzed, synthesized, and documented as a starting point for any future work.

3) A heavier emphasis should be placed on descriptive research (to understand a phenomenon) as a complement to improvement research (designed with intended impact on practice) in order to provide a sufficient base for conceptual and theoretical work.

4) Studies will need to vary in length and design in recognition of the multivariate nature of phenomena being studied. Studies should utilize knowledge (substance and procedures) from other disciplines and employ diverse methodologies, both quantitative and qualitative.

5) Research should stress interaction using a collaborative teaming approach, and practitioner teacher educators (school-based, higher education, and other) should be involved in all phases.

6) Before research is undertaken, costs and benefits for the process and for the implementation of findings should be weighed; i.e., some type of cost-benefit analysis should be done in relation to potential for useful, practical pay-off.

The recommendations described above serve as the backdrop against which the following priority research issues were delineated by the collective constitutent representatives:

1. Research on teacher educators as practitioners should be undertaken. Specific study foci might be: clearer identification of the target (characteristics, training received versus that needed, skills developed versus those needed); clearer conceptualization of the role (how and what training is carried out by the teacher educator and what roles accrue to them); study of effects (on students, on sex or racial biases, and in different contexts).

2. Research about the teaching/learning process should be extended and the already existent knowledge base about it should be considered in terms of its implications for teacher education practice. More specific foci might include: effects on the process by different teacher education programs or component variables, relationship to teacher characteristics, test of current concepts with new target populations, and use of a wider set of criterion variables about what entails "good" practice.

3. A more accurate descriptive normative data base about what constitutes the content of teacher education should be developed, along with analytic appraisals of what it might or should be; i.e., criteria determined for selection and organization of content.

4. The current process of teacher education should be explicated and integrated, alternative models developed, and factors moderating effectiveness identified.

5. Theoretical and conceptual work must be done to promote an understanding of the influence of various contexts of teacher education (social, cultural, political, economic) through descriptive research. Important variables in both the training and work setting should be identified, and teacher preparation process developed that takes into account contextual factors in the work place.

6. Attention to basic descriptive and theoretical work examining professionals as adult learners is needed. This would include syntheses of existing work as well as extensions and further exploratory effects. That knowledge should provide one base for the design and delivery of training for teachers and teacher educators.

7. Description and theory generation about collaborative models which are presently in practice should be undertaken. Conditions which facilitate or hinder collaborative efforts, and factors which maximize its usefulness, should be identified.

8. The change process within educational institutions should be studied, and formal mechanisms for the dissemination of information and for the application of research knowledge in practice should be developed.

PREFACE

This document represents the collective activities of a great number of individuals from a wide range of professions and backgrounds. The diversity of backgrounds should not, however, belie the fact that the participants had a common goal: to provide, through research, the information necessary to help teachers and teacher educators in performing their jobs more effectively.

The impetus for this document and for improving teacher education stems, to a certain degree, from a renewed awareness of the complexity of the teaching role, and a sense that providing support to teachers will do more to improve schooling than the enforcement of rules and regulations. We are, fortunately, witnessing a lessening of public pressure to change schools through the imposition of laws, or the imposition of programs for teachers--many of which prove inappropriate or unfeasible and simply increase the frustration levels of teachers--and an increase in awareness of the need to support teachers through more relevant and timely teacher education activities, adequate and appropriate supplies and materials, and facilitative school organization structures. This attitude is reflected in a recent article by Howard Howe II in which his first "Commandment for Improved Learning" is:

> 1. Put more time, effort, and money into helping teachers contend with their difficult task. Good teaching is far more difficult than is commonly understood. Teachers have to have knowledge about methods and subject matter; experience in using these; and patience, emotional balance, and good sense in dealing with young people. Moreover, today's teachers face special difficulties because the schools reflect the stresses of society and because we have committed ourselves to educating all children.

One major element of a supportive approach is responsive and responsible teacher education, and it is toward the improvement of teacher education that this document is addressed. Research knowledge can contribute to this improvement in four ways:

1. Provide base-line information about existing practices;

2. Contribute to an understanding of why practices have evolved as they have, and the structural boundaries of change within those practices;

3. Provide information on the determinants and outcomes of successful teacher education practices;

4. Provide information on the most effective ways to improve existing teacher education practices.

It is my conviction that collaboration among the research community and the constituencies which are most affected by teacher education will contribute to the improvement of teacher education, our schools, and, ultimately, to the improved education of our children. This document represents an initial step in that direction.

I would like to thank everyone who has contributed to this document. Special recognition goes to the R&D Center for hosting the conference; to Gene Hall and Shirley Hord for their excellent work in coordinating planning activities and the conference itself, as well as in the difficult job of developing this synthesis; to the Planning Committee for dedicating their time and talents with enthusiasm and insight; and to Joseph Vaughan of NIE for his supportive monitoring throughout the effort.

Virginia Koehler
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October 1979

Synthesizer's Note:

The development of this report has been a very challenging and rewarding experience for one who has had a long-term interest in and concern about teacher education. I was pleased to have the opportunity to synthesize the extensive discussions that have taken place during the last year.

Teacher education and research about it have been fraught with great need, confusion, aimless hysteria, wistful hoping, and, in some cases, driving visionary action. The staff of the National Institute of Education and the Texas Research and Development Center for Teacher Education perceived a need for those concerned in the area to come together and discuss issues, learn about recent research knowledge, and to collaboratively plan future directions. This report is an attempt to synthesize the outcomes of that collective effort; i.e., the hot issues and most pressing needs that the diverse experts and constituencies have addressed during the last twelve months of exploration. It is not the agenda for research on teacher education; however, it certainly has the basis to be an agenda.

The reader will observe that many of the recommended directions, sample questions and problem areas are fuzzy in definition and that some are redundant. This is, in part, a reflection of the present state of the discipline of teacher education research. This lack of specificity is also due to the intent of this edition to quote original sources as much as possible and to be a synthesis of discussions, with as little analysis as possible. It is the responsibility of teacher education researchers and policy-makers to operationalize the activities that will address the issues and directions described here.

With regard to the development of this report, there are many individuals and institutions that should be acknowledged, and everyone involved merits a note of appreciation. In addition, several persons and groups who contributed so much to the success of the planning effort, the national conference, and the synthesis of recommendations must be individually acknowledged.

High on the list is the staff of the National Institute of Education--especially Virginia Koehler and Joe Vaughan--who, in the midst of the bureaucratic wonders of Washington, continue to be sensitive to research needs and supportive of unusual ventures. My colleague Shirley Hord and the members of the National Planning Committee all worked far beyond the hours for which they were paid to ensure that our shared concerns would have the most extensive examination possible. Special acknowledgement must also be given to Nancy Via, Roy Lenning, Brian Blakeley, John Hutchinson, Janet McCord, and Vicki Westlund: the solid staff behind all those little-seen jobs that are necessary for the success of a large-scale effort. As one example of their efforts, note that 54,000 pages of conference papers were duplicated and collated during the week of the conference.

Special acknowledgement must be given to Bernard McKenna, who was our most persistent supporter and the sharpest critic at giving feedback and stimulating clear reflection. Thanks must be repeated to Joe Vaughan, who was a steady and wise advisor throughout this project and who really used a sharp pencil on the first draft of this report.

As a final note, I cannot help but offer some observations on the constituent-based collaborative process that has driven this effort. I now have a much clearer empathy with military leaders, such as Eisenhower, who were responsible for planning and accomplishing major invasions. One is constantly barraged with "profound" issues that must be resolved. One example is a national paper strike--the solution: cache paper for the copying machine two months before it is needed, even though others were sure it wouldn't be a problem! Another example is a university policy requiring that a transportation bus be parked a block away from the conference site while participants walked through a Texas-size downpour--the solution: complain, walk quickly and carefully, and afterwards write a hostile memo. Likewise, one must deal with the colorful personalities, such as the Generals Montgomery and Patton. All in all, the task is draining. Yet, I must admit that the outcomes of a collaborative effort have been significantly better than they would have been if the same task had been done by an individual or a closed, small group.

In summary, there is a lot of intense concern about research on teacher education at this time. There is a wish to advance the field; the conference has been one step toward that advancement. Hopefully, other individuals, institutions, agencies, and associations will take other steps in the same direction so further progress can be made.

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October 15, 1979

PART I

DEVELOPMENT OF A NATIONAL AGENDA

BACKGROUND

The time is right for our understanding of teacher education to be improved through research and development activities. There is a rich diversity in perspectives; interest abounds; the necessary skills are developing; new knowledge bases for support of such activities have been developed, and tested to some degree in other areas of educational research; and, clearly, there is a need.

However, such initiatives could run in many directions at once if there is no overall framework or collective direction for the discipline as a whole. Likewise, there are limited resources and personnel available. Obviously, efforts must be focused and issues prioritized with our best available knowledge, sense of equity, and, to some extent, intuition.

In April of 1978, an eighteen-month planning grant, "Designing a Research and Development Agenda in Teacher Education" (R&DATE), was awarded by the National Institute of Education to the Texas Research and Development Center for Teacher Education. This grant enabled the Texas R&D Center, NIE, and the profession to begin to explore ways in which educational research and development could most appropriately address current and projected issues in teacher education. More specifically, the goals of the project have been

1. to delineate and prioritize crucial, researchable issues in teacher education for the development of a three to five year constituent-owned national research agenda in order to ultimately maximize benefits for children and society at large,

2. to investigate means by which various teacher education constituent role groups might collaborate in a cooperative effort to catalyze and explore current issues and dilemmas in teacher education,

3. to address the formally-stated concern of Center staff, NIE, teacher education colleagues, and the congressionally-appointed Lab/Center Review Panel that the Center assume a position of leadership in teacher education research and development.

Proposed Activities

To achieve these objectives, a number of activities were undertaken, including:

a. A National Planning Committee was established for the purposes of collaborative planning that included representatives from significant constituencies related to teacher education.

b. An invitational conference "Exploring Issues in Teacher Education: Questions for Future Research" was held in Austin, Texas, in January 1979, to address critical issues in teacher education.

c. A mission statement to NIE for proposed research in teacher education would be developed, priorities set, and projected needs explicated on the basis of the invitational conference and other sources of information.

This report will document the accomplishments of the project. More specifically, activities "a" and "b" (above) have been undertaken and will be briefly described. It begins with a synthesis of the discussions, presentations, and study that have taken place. It describes the conceptual framework developed during the agenda-building process and discusses the identified priority areas and recommendations for research and development.

This report attempts to represent the rich diversity of opinion and depth of reflection. However, because it is a synthesis, it cannot guarantee that it accurately reflects all important points or all perspectives on every issue. The reader is encouraged to read the prepared conference papers (see Appendix C) and to discuss the agenda-building process with members of the

National Planning Committee and conference participants (see Appendix A and B) in order to develop a more complete perspective on the identified research priorities.

R&DATE Project Management and Organization

For the purposes of project management, a four-tiered committee structure was established. The principal staff for the R&DATE project (N=3) served as the Project Management Team and were responsible for daily operations. This team combined with representatives of the other existing projects in the Texas R&D Center to form a Center Planning Committee (N=8). This committee incorporated the diverse expertise accumulated by the Center over its years of research and development activity.

The largest formal group was the National Planning Committee (N=17, see page i) composed of the center committee and selected individuals representing the various constituencies in teacher education. These representatives were sought through nominations from organized groups and from individuals on the basis of specific areas of expertise. This committee met three times between August 1978 and February 1979 to recommend policy, and also aided in planning the issues conference and determining the priority areas described herein.

Conceptual and Structural Framework

Based on extensive reflection, an overarching conceptual framework was developed by the National Planning Committee. This framework was used to structure the invitational conference topic areas, issues, and presentations.

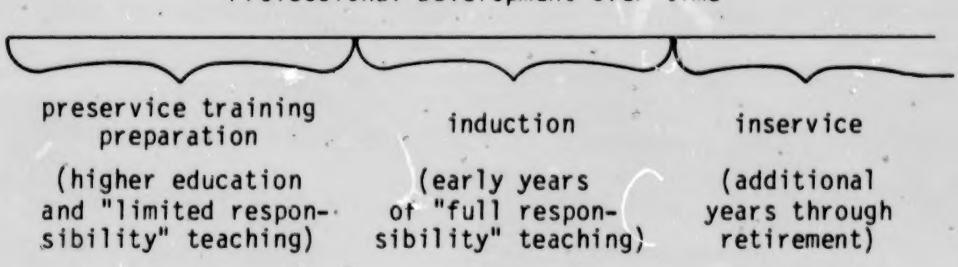
In order to identify conference topics, two basic questions were addressed:

(1) What is the present state of the research and development scene in teacher education?

(2) What are the key research and development priorities for teacher education now and in the future?

The conference was organized around two dimensions: (1) the Teacher Education Continuum (preservice/induction/inservice) and (2) Teacher Education Topic Areas. The "Continuum" concept represented the consensus of the national committee that teacher education should be viewed as a continuing process of developing or enhancing knowledge, skills, attitudes, and behaviors (Figure 1). Seven topic areas were identified as a basis for organizing present knowledge and research problems (Figure 2).

Figure 1: Teacher Education Continuum



Once the conceptual framework was established, the National Planning Committee nominated individuals with expertise in the identified areas to do commissioned papers. In all cases, strong preference was given to developing a mix of role groups, races, sexes, ages, experience, and orientations. In all, 150 individuals attended the conference (see Appendices A and B).

Figure 2: Teacher Education Topic Areas

I. Content:	What does research and development suggest for the content of preservice, induction, and inservice teacher education?
II. Process:	What are the present conceptual and empirical perspectives on the design and delivery of preservice, induction, and inservice teacher education?
III. Professionals as Learners:	What does present research and theory say about teachers and teacher educators as learners?
IV. Collaboration:	How do the various roles and various substantive and process areas work interactively to design, deliver, and assess preservice, induction, and inservice teacher education?
V. Context:	How do social, political, economic, and cultural realities affect preservice, induction, and inservice teacher education? How can theory and research address these realities?
VI. Research:	What are present strategies, promises, and limitations of research for contributing to the design, development, and evaluation of preservice, induction, and inservice teacher education?
VII. Change/ Dissemination:	How can research knowledge and products be shared collaboratively and effectively with constituent role groups and how can practical application to improve real-world teacher education practice be facilitated? How can we increase the knowledge base about the change process in order to accomplish the above?

THE CONFERENCE PHASE

The Issues Conference, "Exploring Issues in Teacher Education: Questions for Future Research," was held on January 10-12, 1979, in Austin, Texas.

Goals

The conference activities were intended to provide an opportunity for participants to consider these major questions:

a. What is known presently about research and development in teacher education?

b. What are the issues and problems facing teacher education today which need solutions in the next five years?

c. What are the key research and development strategies appropriate for addressing these issues and problems?

Organizational Format and Activities

The conference framework challenged the presenters and participants to analyze the topic areas (Figure 2) across the preservice-induction-inservice continuum (Figure 1). The three days of the conference were divided into seven half-day sessions organized around each of the topic areas. The first part of each session included a presenter's overview of the research and conceptual frameworks currently addressing the topic, followed by several specialist presentations focused on specific research questions generated by these areas, and, finally, prepared discussions of the presentations. The second part of each session involved small work groups. On the basis of the presentations and their own expertise, these groups worked collaboratively to identify key issues for future research and development in teacher education.

In order to facilitate discussion, the work groups that were formed at the beginning of the conference remained intact throughout. Specifically, the objectives for the groups were (1) after each topic presentation, identify the most important research questions derived from the topics and (2) at the end of the conference, develop a problem statement that would tie together major research questions from each topic into a conceptually integrated, yet broadly encompassing focus for a research and development agenda.

There were fourteen ten-member groups. Each had teacher and teacher educator representatives, as well as representation from many other constituent groups. A chair and recorder were selected and instructed about their task prior to the conference. At least one topic area presenter and discussant were assigned to each group. (Paper presenters and discussants in each topic area are listed in Appendix A; and the papers, in Appendix C).

Post-Conference Analysis and Synthesis

Each of the work groups produced a set of research questions and/or problem statements for each of the seven topic areas. The task immediately following the conference was to develop a synthesis of the key issues and the formulation of a set of questions that should become priorities for teacher education research based on the conference proceedings and pre-conference planning.

All members of the national committee received the products generated by the work groups. Each member analyzed these products from a personal perspective and developed a synthesis of issues and research priorities, each of which was then reviewed by the other 17 committee members. The committee then met on February 25-26, 1979, to discuss individual syntheses and to develop a

set of recommendations. This report presents the outcome of that discussion and the initial set of recommendations for a national agenda for research and development in teacher education.

PART II
OVERALL PERSPECTIVE OF THE NATIONAL AGENDA

GOAL OF THIS REPORT

The activities carried out prior to this report have been designed to provide the best grounding possible for suggesting priority research activities in teacher education. Based on the collective judgment of the various constituencies, the report represents a sense of directions for addressing current pressing problems and future needs. More specific recommendations follow the suggested directions. The recommendations are offered with the long-range goal in mind of helping all children receive the best formal education possible. This can be facilitated by educating teachers so that they can be more effective with students. Put most simply: the goal of this report is to promote understanding of and improvement in teacher education practice through research.

A MULTIDIMENSIONAL PERSPECTIVE IN DEVELOPMENT OF THE AGENDA

The topic of teacher education is clearly of present concern to many. In the first two months of 1979 alone, indicators include:

1. An international, invitational conference on research and development in teacher education convened at the Texas R&D Center for Teacher Education. Presenters, discussants, and participants included key practice, policy, and research leadership.

2. Concurrent with the Texas conference, a large meeting of state, higher education, and other personnel concerned with teacher education related to mainstreaming took place in St. Louis, Missouri.

3. The Association of Teacher Educators meeting, held in Orlando, Florida, in mid-February was one of the most active and substantive meetings ever held by that organization.

4. The annual meeting of the American Association of Colleges for Teacher Education, which was held at the end of February in Chicago, had its largest attendance ever. The theme was "Inservice Education."

During this same period, other well-attended regional and local conferences were held which dealt with various aspects of teacher education. Similarly, recent federal funding initiatives, such as NIE's support in staff development, are indicative of the trend.

An examination of these activities reveals that teacher education is being addressed by persons with many different professional perspectives and roles. Their concerns and ideas are diverse; the issues they choose to address range widely. Not surprisingly, this diversity in perspective was apparent at the issues conference. As a result, a number of major themes arose, reflecting this diversity, which include the following:

The Preservice-Induction-Inservice Continuum. Teacher education has often been conceptualized as taking place at one time; i.e., at the college campus during preservice training. However, the process is more appropriately represented as a broad continuum of activities, both formal and informal, which range from preservice to induction and on to retirement. The professional and personal development of teachers is beginning to be viewed as a career-long process.

Changes in Influences on Teacher Education. Teacher education is no longer under the sole auspices of the professors of education on the college campus; many different groups are becoming actively involved in governance and delivery. These include teachers and teacher organizations, administrators, school boards, state education agencies, legislatures, staff developers in school systems, curriculum consultants, field personnel of intermediate units, staffs of labs, centers, and teacher education centers.

Advances in Research Methodologies. A richer world of methodology is now available to the researcher. The often used quantitative techniques have benefited from new concepts and analytic procedures. Qualitative methodologies, including ethnography, have recently received increased application in educational research.

Different Research Emphases. Descriptive research, theory-building, and synthesis activities are clearly needed in some areas of teacher education, while in other areas, comparative, experimental, and improvement studies may be in order. In still other areas, established research-

based knowledge is available, and studies are needed to determine the extent to which information can be of immediate use in teacher education practice.

Diversity of Ideologies. Among the many actors involved in teacher education, there is diversity in ideological perspectives. Some of these are, to some extent, supported by research evidence. Other ideologies appear to be more perceived than documented or even articulated. However, each is viable and has strengths to offer to increased understanding of teacher education.

The World of the Teacher Educator. Teacher education practitioners are a diverse and multi-faceted group. The location in which they do their work varies, some being based in institutions of higher education, others being school-based. The point along the continuum at which they do their work is varied, as is the extent to which teacher education is a full-time or part-time responsibility. Furthermore, many teacher educators appear to work in isolation with little communication about the pedagogical nature of their work on a local, regional, or national level. They may, however, have some contact with colleagues in relation to a specific aspect of teacher education, such as the teaching of reading. Cumulatively, there may be a significantly large body of knowledge about teacher education practice and what is effective at various points along the continuum, but it is apparently not shared across the profession.

The Individual and/or Collaboration. Collaboration is being encouraged and, in many cases, practiced in both the conduct of teacher education and in limited research and development activities. Thus, a range exists, from individual activity in the field to highly collaborative efforts involving teachers, researchers, and other educational personnel. These diverse activities have the potential to concurrently relate to research and development efforts.

The Knowledge Base. The existing knowledge base about practice in teacher education is held in a fragmented fashion by specialists in many different areas--adult learning, reading methods, staff development, etc. Knowledge about the practice, the consequences of different approaches, and different theories and models for research and practice does exist in ranging degrees, but this knowledge is not fully described or compiled in any usable format or central repository.

Women and Minorities. Important both to research and to practice in teacher education is the involvement of women and minorities as researchers and practitioners. Their involvement is a cornerstone of the pluralism that must be fully considered in future research and development efforts.

Multicultural Dimensions. Teachers and teacher educators come from and work with different cultures. Multicultural aspects of teacher education are clearly in need of research. Those dimensions must be re-

flected, whenever appropriate, in the design of research studies and in teacher education practice.

In summary, the practice of teacher education, and research and development activities related to it, are characterized by high interest and extreme diversity. The immediacy of the need for advances in the process, substance, and overall quality of teacher education activities by research and development is unquestionable. The high level of abilities and the current challenges, in conjunction with the national concerns, make this the ideal time for determining priorities for research. However, at the same time that this rich diversity and energy encourages activity, it also makes steady and coherent movement very difficult. It is hoped that the extended efforts that have lead to the development of the recommendations presented herein will provide some stability and enable forward movement.

RESEARCH STRATEGY RECOMMENDATIONS

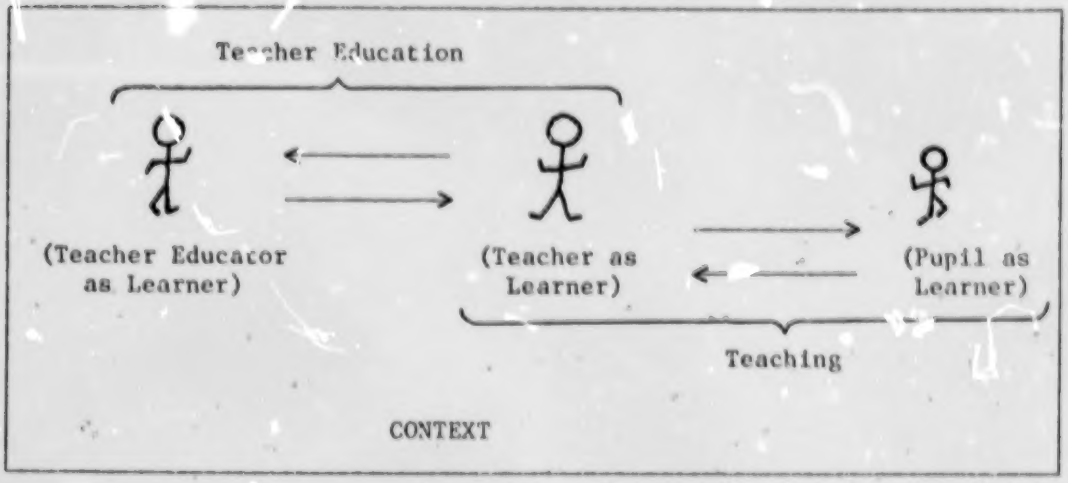
There are several recommendations for future research on teacher education that transcend the specific topics that will be presented in the subsequent section. A basic summary statement of these over-arching recommendations is: Research and development priorities and research activities in teacher education must be approached from a multidimensional and a pluralistic perspective.

At this time, it does not appear that there is a single set of issues that research should pursue. Rather, there are diverse topic areas and multiple approaches that should be engaged if the richness of the perspectives that exist is to be capitalized upon and if useful new knowledge is to be develop-

ed. Obviously, this is not a simple or a short-term task. It requires clear conceptual efforts and accurate descriptive and analytical action.

In order to emphasize the components of the teacher education teaching/learning process being addressed, Figure 3 provides a simplistic illustration.

Figure 3



For teacher education research, teacher educators are the "practitioners" and teachers are the "learners." In research on teaching, teachers are the "practitioners" and pupils are the "learners." Clearly, teacher education has to address the research knowledge available from research on teaching. In addition, teacher education has to understand the characteristics of teacher educators as practitioners and learners in their role, as well as the composite interaction that is represented by teacher educators helping teachers to be-

come more effective in their role. And, perhaps most important of all, all of this takes place within a complex context that is only slightly understood. These role and process differences should be kept in mind in reviewing these recommendations.

In setting research priorities and designing studies, the following parameters need to be considered:

1. Teacher Education as the research area. Many educational research studies can be associated with or have implications for teacher education. However, in this agenda, the area of research is specifically teacher education. Teacher education encompasses the continuum from preservice (which normally consists of undergraduate professional preparation) to induction (the first few years of "full responsibility" teaching) to inservice (the career-long development and education of practicing teachers). A key issue is why this continuum is not better understood and articulated. Research should address questions that pertain at all points on the continuum and perhaps even examine points beyond both ends.

2. Knowledge base synthesis. Knowledge about practice is available from many sources that has not been documented. Knowledge is available in different specialities that deal with the training of teachers. There is a knowledge base in education research, aspects of which are relevant to teacher education. There is research knowledge outside of education that is relevant. At this time, this knowledge base is neither formalized nor shared across groups of researchers, practitioners, policymakers, or members of the teacher education profession. In many instances, this information must be documented and synthesized before teacher education "research" can be fully informed. Descriptive syntheses and analyses of the existent knowledge bases across the diverse memberships and the multitude of teacher education activities is urgently needed.

3. Pluralism, an essential element of both teacher education practice and of research and development. Both teacher educators and teachers must be prepared to respond adequately to the demands of student, cultural, linguistic, and other pluralistic conditions of our society. They must be able to meet the need to maintain the cultural integrity of diverse populations, or to comply with social and legal mandates (such as PL 94-142). It is crucial that this pluralism be recognized and acknowledged by the research community, both in the manner in which study issues and techniques are chosen and in the personnel and instrumentation used to conduct, analyze, and interpret research.

4. Emphasis on descriptive rather than improvement-oriented research. Although diversity in types of research is warranted, there is

an urgent need for more descriptive research. Various knowledge bases require synthesis. There is need to better understand the nature of the teacher as learner and the change processes that take place during teacher education. Relatively little is known about many aspects of teachers and the extent to which they are independent or interdependent. As a complement to descriptive work, conceptual, analytical, and hypothesis-building activities are crucial as a basis for grounded theory development. This recommendation is not intended to discourage improvement-oriented research in those areas where evidence appears to warrant it (e.g., studies of the influence of teacher education programs developed from hypotheses derived from teaching effects research). This assertion, however, is based on the need for a clearer picture of the important variables and their possible relationships.

5. Use of both quantitative and qualitative methodologies. The multidimensional nature of research needs in teacher education calls for many types of research methodologies. Diverse approaches should be encouraged and used when appropriate.

6. Collaborative involvement in research. Given the complex nature of the issues and the need for multiple perspectives, all phases of teacher education research should include collaboration among many parties. There are valuable skills and insights to be gained from teachers, teacher educators, staff developers, administrators, and others. These must be capitalized upon, when appropriate, if maximum benefits are to be gained in accuracy, credibility, and usefulness of research efforts.

7. Involvement of teacher educators in particular in teacher education research. Teacher educators are the practitioners of teacher education. School-based teacher educators, higher education teacher educators, those in intermediate units, associations and other agencies should be involved in designing, conducting, and analyzing research. Their needs and perspectives will be of great assistance, not only in determining the questions, but also in interpreting the findings.

8. Weighing of costs and benefits. The potential topics for teacher education research should be carefully weighed in terms of the costs for conducting research and projected potential benefits to be derived. Limited budgets are a present-day reality. It would make little sense, for example, to examine the effectiveness of a teacher education approach which utilizes resources or materials that are very expensive or are unavailable to a vast majority of programs. While this type of individual program could justify an evaluation of its own effectiveness, the investment of non-local funds would be generally ill-advised.

The above points represent the primary recommendations that underly the more specific study topics to be described subsequently. To summarize, cur-

rent research should both utilize and preserve the rich diversity of perspectives and capitalize upon the existent knowledge base.

PART III
PRIORITY TOPICS FOR TEACHER EDUCATION RESEARCH AND DEVELOPMENT

In the preceding section, an overall perspective was provided for setting priorities for a research agenda in teacher education. In addition, a set of criteria that could be used for selecting research studies are proposed (see Appendix D). In this section, the criteria and the perspectives will serve as background for the identification of more specific priority topics and questions for research.

Within each of the topic areas, a brief discussion is presented, along with an array of questions. The specific questions presented here are in the words of their authors. The primary sources were the notes of the conference work groups and the commentary of the prepared discussants. The clustering of the questions was done by the National Planning Committee and the Project Management Team. All questions are not necessarily of equal importance, and it is certain that to answer some would require research on others. Research designs for how the questions might be approached are left to the creativity of the reader.

It should also be noted that the first topic, "Research on Teacher Educators as Practitioners," was not a part of the conceptual framework that was developed during the planning process. This topic, which follows below, was added as a result of the conference discussions.

RESEARCH ON TEACHER EDUCATORS AS PRACTITIONERS

> It should be remembered that there are at least two levels of training and, perhaps, of content. The first level is teacher training and the knowledge and procedures involved in it. The second is the training of teacher educators in knowledge and procedures of teacher training. This distinction between levels should go without saying were it not for the fact that colleges of education, after the fashion of graduate schools, have emphasized research training of doctoral students instead of training in professional skills. Consequently, the personnel of colleges of education are mal-adapted to the job of teacher training. The preparation of teacher educators is a crucial factor in the improvement of teacher education . . . (Smith, 1979).

Teacher educators are scattered across many contexts, ranging from institutions of higher education (IHETE) to school-based (SBTE). In many cases they are geographically isolated or are isolated as a small component within the field. All too frequently, teacher educators have few opportunities for formal training and renewal.

The use of teacher educators as subjects of research has been quite limited, and many questions remain unanswered. What are the different roles of teacher educators at different points along the preservice to inservice continuum? What kinds of preparation are appropriate for teacher educators and what kind do they receive? Do school-based and higher education-based teacher educators function differently? If so, in what ways? We need to know more about the various forms of professional development for teacher educators. More particularly, we need to better understand how to help teacher educators become more thoughtful and more serious about examining their field of practice. This area of research might well call for some planned interventions, as well as diverse forms of descriptive research. It might also link research on teaching teachers with research on teaching children and youth.

The following are some specific research questions on this topic area:

A. Clearer identification of characteristics of teacher educators.

1. Who are teacher educators? Why do they become teacher educators? What are their characteristics? What is common and what is diverse in their demographic and educational-experiential backgrounds?

2. Are there identifiable minimal or optimal knowledge, skill, and experience requirements for (different varieties of) teacher educators?

3. What are the criteria for effective teacher educators?

B. What is their role?

1. What content, through what processes, is actually delivered by teacher educators, and how are such decisions influenced and made?

2. How are teacher educators trained? What differences accrue in the role and function of those who have been trained through heavily research-oriented doctoral programs versus heavy professional programs?

C. What are their effects? [What kinds of teacher educators engaged in what kinds of teaching have what effects upon what kinds of (prospective) teachers in what contexts?]

1. What is the relationship of teacher educator intention and expectations to his/her teaching behavior and to its intended and unintended effects upon students?

2. To what extent do teacher educators introduce or perpetuate racial or sexual biases in their instruction?

3. What are differences in teacher educator effects in different contexts (e.g., IHTE, SBTE)?

THE TEACHER EDUCATION CONTINUUM

One constant theme reiterated during the development of this agenda is the lack of articulation about the teacher education continuum, the development process from preservice to induction to inservice to retirement. In this

country, the present research literature is probably the most extensive and systematic in the area of preservice teacher education. A commonly reported research finding is that teachers find their student teaching experience to have been the most important part of their preservice training. (Interestingly, little or no attention was given to student teaching in the discussions and issues described here.) Recently, the most notable would include the U.S. Office of Education elementary models, the competency-based teacher education movement, and various experimental programs that have come from humanistic and personalized assumptions. At the inservice level, Teacher Corps and the movement towards teacher centers are clearly indicators of the developing impetus for more effective inservice education.

The area where least is known and least attention has been directed is in the first three years of inservice experience, the period referred to as "induction" by teacher educators in the United Kingdom and Australia. Clearly, more knowledge is needed about the induction phase as it is experienced by teachers in the United States. Attention and resources must be made available to assist teachers at this crucial time in their careers. Not only is the research knowledge base presently nonexistent, but also it appears that there is limited practice that is directly focused on induction.

Related to the above issues are other issues pertaining to who carries out training at the various points in times. For which aspects of teacher education is it most appropriate for faculty of institutions of higher education to provide leadership? For which aspects of teacher education is it more appropriate for the teacher educators to be school-based? The assignment of authority and responsibilities for teacher education along the continuum can not be clear cut, but there are emerging practices that could be examined for

relative costs and benefits. It appears that the present dynamics over control of teacher education will result in a redistribution of authority. Without research, there is likely to be a cementing of certain distributions based purely on a political and economic basis, without enough attention to what the consequences are for effective teacher education practice.

Specific questions for research include the following:

A. Theory-practice balance

1. What kinds of needs assessment are most appropriate and valid in designing teacher education/staff development programs? Whose needs should be assessed?

2. What differences in teachers result from theory-heavy versus practical-heavy programs? From programs structured primarily on college-defined professional areas, on learning needs of students, on research? Do training effects differ at various career stages?

3. If experience and reflection are both necessary in teacher education, can the optimum balance between the two be defined (and tested) at each career stage?

B. Program initiation and control

1. Are there systematically differential effects on teachers when teacher education/staff development is controlled by college personnel, school district trainers, teacher centers, teachers themselves, collaborative agencies with parity?

2. Different content and processes of instruction/learning are probably required at different career stages and in the service of different educational goals. Can research explore these relationships to the ultimate benefit of program design and effective pacing of training inputs and agents?

3. Are there systematic differences in the effect of teacher training delivered through college courses and the same training delivered to natural work groups in the schools?

C. Optimal, differentiated training across the career life cycle

1. What are (would be) the systematic differences in teacher education programs designed by higher education consensus and school practitioner consensus for preservice, induction, and later career levels?

2. Do different kinds of preservice programs make the induction process, and subsequent coping with unanticipated teaching contexts, more or less easy for their graduates?

3. What are the relative advantages, costs, and dangers of alternative delivery systems for preservice and inservice training?

4. Can research identify and substantiate the particular knowledge, skill and experience which is most effectively delivered, processed, and mastered at each stage of the teaching career and contribute to a more realistic and efficient division of labor among training agency resources?

THE CONTENT OF TEACHER EDUCATION

The area that likely has the most extensive history of practice, research, and theory is the content of teacher education. At the same time, this area probably has the most diverse opinions and practice. Clearly, the knowledge of content is not shared equally or agreed upon by all. Beliefs diverge about the sources of content, when content of various types should be delivered, when teachers should be introduced to content of different types, and which content is most relevant to actual practice of teachers with students. In his critique of the planning activities and conference proceedings, Ken Howey (1979) has suggested the following:

> We need to understand better what the normative information (knowledge) base in preservice (and transitional, if possible) programs of teacher education currently is. This should include, as Smith has pointed out, not only the professional sequence but the undergirding disciplines. Curricular analysis is needed here. At the same time we need to more clearly ascertain both (a) what the multiple sources of information which comprise the teacher education curriculum are and (b) what these might/should be. These sources would obviously include not only research (K-12, social-psychological, learning-cognitive, etc.), conventional (collective) and specialized insight and sophisticated task-role analyses, but present and future societal needs as well. It might be helpful here to look at why certain data and data sources are not adequately utilized.

Howey goes on to suggest the need for explication and further development of criteria which should be used in the selection of content and principles for organizing it. Another planning committee member, Judy Lanier (1979), has further expanded upon the need for criteria:

> The area for research that I would give first priority concerns the "criterion question" in teacher education. If teacher education is directed in some sense to change and improvement of teaching practice (as it is) and if we are to study teacher development (which also suggests a form of qualitative growth) then we must be clearer about the meaning of this "positive direction." Decade after decade scholars in the field have called for more useful and valid means of describing what it is we are striving to achieve through the education of teachers. If educating teachers helps them "do something better" (e.g., think better, act better--even be better) then our ability to become smarter about teacher education depends upon a useful and helpful conception of what constitutes successful functioning as a teacher. Yet, while we have known that the criterion question is of vital importance, we have not yet identified ways of asking or addressing the question that have been fruitful. Yet, because the question is so critical to the productivity of almost all future inquiry in the area, I am not ready to give it up as an impossible task. Intensive reviews of the literature, some high powered conceptual work and informed deliberation, combined with a series of judgment studies may help us find a breakthrough to this very complex and difficult problem of the field.

At the inservice level, the issues around content become even more complex and less well understood. As Pratt (1979) pointed out in his paper:

> Many teachers come to inservice classes feeling confident and reassured about what they are teaching and the manner in which they are teaching. These teachers often appear to feel as though what they are doing cannot and should not be changed and improved. On the other extreme, there are brand new teachers who come into the profession with only modest training or teachers who have been transferred to a new assignment or teaching grade level or type of school (open space, team-teaching, IGE, etc.). These teachers often come to inservice classes seeking answers to the problems they are facing in their new position . . . . As teachers become more experienced on the job they tend to become more diverse in their attitudes, values and experience. This diversity makes the selection of content for inservice programs a difficult task. In addition, most teachers soon become concerned with the socilization of their students. This goal often creates a gap between needs of the classroom teacher and the inservice instructor's perception of what those needs should be.

Smith (1979), in his analysis, made a distinction between generic content and specific, subject matter related content. More specifically, he suggested some criteria for determining content:

> All can agree that content is whatever is dealt with in textbooks, courses of instruction, or lectures. But for present purposes we must know more than that about what content is. Is it empirically valid? Does it include practical information gained from experience? What are its elements? Does it include skills? These and other questions are to be considered.

In conventional thinking, the content of teacher education is conceptualized as that which is covered in preservice or inservice courses and other formal training experiences. Fenstermacher (1979) emphasized informal content:

> When teacher educators think about the content of teacher education programs, they frequently presuppose the matter to involve conventional kinds of questions about curriculum: What should teachers be able to do? What studies enable them to do this? The point of this paper is that these questions should be recast as questions about the contents of teachers' minds and the contents of teachers' workplaces. Future research may profitably be directed to determining whether the contents of workplaces (especially their institutional features) are the critical determinants of the contents of teachers' minds. If they are, then the "real" curriculum of teacher education is the teacher's on-the-job experience.

Classroom researcher Good (1979) spoke more optimistically about the research base that is presently available to assist in identification of content, "I believe the data base for identifying some of the content for teacher education programs is beginning to emerge." Good went on to emphasize the fact that it is clear from research that teachers do make a difference, and that, depending upon what teachers do, there is a difference in terms of their effects. More specifically, Good suggested the following:

> Several agenda items for teacher education programs flow from recent process-product studies and other classroom research involving observation. Classroom management, direct instructional principles, and information about teacher expectation effects would appear to be sensible

parts of teacher education programs. Teaching candidates need to read (and to see) some of the positive possibilities of schooling as well as information that conveys some of the failures and disappointments of schooling. Too often training programs depict learning situations as mindlessly simple or as hopelessly complex. The balanced conclusion that teachers can make a difference in some areas but that it takes hard, sustained work (and still there will be some students who cannot be motivated) is a view that seems a more reasonable posture for teacher education programs.

Clearly, much is known about the content of teacher education, yet there is much to be learned. It is not clear which content is most appropriate, particularly at the various points along the professional continuum. It is not clear which of the recent research findings should be incorporated into the content, or when.

It appears that one of the most urgent next steps is the development of a more accurate descriptive data base about what is content and more analytical appraisals of what it might be. Following this, more focused empirical studies on the when and how could be developed. Restated, there should be descriptive documentation of present practice, generation of a more adequate conceptual map and development of theories.

More specific recommendations for research are:

A. What is the present content of teacher education?

1. A description of both the formal and informal curriculum of teacher education should be developed.

2. How do different cultures--higher education and school practitioners--view and prioritize the content of teacher education? When these two cultures work together, do these priorities shift or change?

3. Does the involvement of the community affect the above priorities?

4. If there is a growing body of knowledge about successful teaching practices, why are there discrepancies between what is known and what is used by teachers in the workplace?

B. What content should teachers be imparted at different times along the professional continuum? On what basis should this content be derived?

1. What should be the knowledge base of teaching?

2. What do recent research findings suggest for the content of teacher training?

3. What does the recent research findings suggest for the training of teachers in working with children individually rather than in groups? What are the sources of content?

4. What are the roles of institutions of higher education and the practicing professions in teacher transition into teaching?

C. Is the preservice-induction-inservice continuum really an appropriate concept, or are there basic differences between effective learning processes and useful content at these various phases of teacher education?

1. Given the continuum of teacher education, at what points are content to address theory and content to address practice most appropriate?

2. What differences will be evident between teachers trained in a high degree of theory versus trained in a high degree of practical content?

3. What experiences are best for teachers, at what points in their careers, and who can deliver them most effectively?

4. Is it reasonable to assume that preservice education content can prepare teachers for the "work place"? Is it possible to train teachers to deal with the "work place" effectively?

5. How do we use and/or intervene in the environment of the "work place" to encourage teachers to use what is known?

D. What is the basis for decision-making used by teacher educators for selection of content?

1. What are the acceptable sources of content (or criteria for content selection) for both preservice and inservice programs?

2. What strategies will enable teachers and teacher educators to recognize content?

3. Can research inform content in any meaningful way?

4. What is an effective process for reducing content to livable amounts and having such decisions accepted by the constituencies?

5. What is the degree of compatibility between program exit competencies for beginning teachers and job entry demands?

6. When are teachers ready to enter the profession?

7. What are the best ways (i.e., most effective in helping teachers) to: (a) select; (b) organize; and (c) present the content that we "have" from various sources?

E. What are the interaction effects between content, process, purpose, and learner characteristics?

1. Can systematically varied teacher education programs be established and their results evaluated?

THE PROCESS OF TEACHER EDUCATION

In contrast to the "content" of teacher education, the knowledge base for the "process" of teacher education seems to be much more limited, less researched, and much less imaginative. As Dillon-Peterson (1979) pointed out:

> Considerably less attention has been paid to the process of teacher education than has been paid to the content. Conventional wisdom tells us that certain processes seem to work, while others are less successful. But there is little more than empirical evidence upon which to base decisions or construct programs of either preservice or inservice education.

Preservice teacher education clearly is focused upon a collection of courses and experiences using a combination of higher education and school- based settings. Ryan (1979) suggested viewing teacher education at the preservice, induction, and inservice levels as being a series of black boxes with there being limited understanding of what goes on inside each of the boxes.

> Most college catalogs in describing teacher education programs list certain components not unlike the following: introduction to education, special methods courses, psychological, historical, and philosophical foundations, and some form of student teaching.

Ryan goes on to say that:

> . . . it might be worthwhile just to point towards some possible other preservice teacher training components, ones that are not in the college catalog. For example, neo-Freudians would suggest we learn to be teachers while still in the crib. Benjamin Wright suggests that our orientation as a teacher is strongly affected by our early social interactions with parents and other siblings. Another component that has long fascinated me is the effect quite unknown of the long years of teacher watching that all of us undergo before entering teacher education.

In his analysis of induction, Tisher (1979) emphasized the following:

> It is important to discover the various factors and the associations between them that affect whether new teachers internalize existing values, comply or attempt to redefine situations. The nature of the education setting, contacts with peers and types of induction experiences are clearly among the influential features but what mixes of characteristics are the most potent in enhancing professional development and educational skills are not clearly understood.

In terms of research thrusts, Tisher suggested:

> Included among the proposals advanced for your consideration were that induction is only one aspect of professional development of teachers; Lacey's concepts of socialization of teachers provides a useful framework for induction studies; more, primarily school-based induction activities should be provided; innovation in and evaluation of induction should be accorded a high priority in the future; inservice education programs need to be designed for experienced teachers involved in induction; and researchers could, with profit, emulate some procedures of the Australian Teacher Induction Project, examine the impact of different educational contexts, including Open Plan ones on induction, study new teachers' latent culture and its effects, and document changes in teachers' job satisfaction. There is clearly much to be done.

In the black box analogy for induction, Ryan (op. cit.) points out:

> . . . we must acknowledge that it is difficult to talk about the teacher training that goes on during the induction period. For one thing induction is not a very well defined concept in education [in the U.S.]. We speak of new teachers and a probationery period, but we do not know a great deal about the process. Nor is there a clear or well defined set of interventions or process components to which we can point.

In terms of inservice, Ryan suggests that the understanding of inservice is at least somewhat better than that of induction:

> The components of inservice training are more discernible than those of the induction period, but still a good deal less obvious and less precise than the preservice components. One way to break down these components would be to categorize them into those the teacher pursues on his/her own and those he/she pursues with other teachers in his/her building.

In her analysis of the process of teacher education, Feiman (1979) encourages a shift in thinking about the process of teacher education as skill training to one of optimizing professional growth and encouraging reflection.

> I want to underscore the fact that a commitment to reflection and growth represents a major departure from conventional views about teaching teachers and major trends in research on teaching . . . . While the current rhetoric of staff development seems to favor a growth perspective, most research on teaching and teacher education continues to endorse a delivery-system or deficit approach.

In terms of directions for research, Feiman suggests:

> Growth and reflection do not lend themselves to short-term interventions or simple techniques. The promise of any approach informed by and directed toward these aims resides less in the techniques involved and more in the way the values they reflect are realized in the situation.

Feiman raised three questions in relation to this perspective:

1. What do we mean by "reflection" and "growth" in teaching? What do these terms imply for preservice, induction and inservice teacher education?

2. How can these aims be fostered? What kinds of approaches, activities, opportunities can help a teacher develop and exercise the habit of reflection and sustain an inquiring stance toward teaching?

3. What are the consequences which accrue to teachers as a result of inquiry-oriented preparation and/or opportunities on-the-job to study their practice?

More specifically, the following priorities about the process of teacher education have been identified:

A. There is a need to define the process of teacher education and the alternative models possible to accomplish that process.

   1. What are the best delivery methods for the various contents, processes, and contexts?

2. Are there programs that consistently produce superior teachers? What accounts for the differences?

3. How do we determine when changes in a teacher education program need to be made? How do we assess the results of these changes?

4. We need feasibility studies, studies of what quality of teachers can be "prepared" at what costs.

5. What are the implications of delivering programs by means other than conventional courses, e.g., experiential learning?

B. What are the most important moderating factors (i.e., teacher attitudes, teacher characteristics, situational characteristics, content characteristics) that determine the effectiveness of any given process of teacher education?

1. What conditions are most conducive to the development of knowledge to make teachers successful? How do we determine which conditions work best for which teachers?

C. What processes, procedures, or settings are appropriate for teachers at different stages of development towards becoming a competent teacher?

1. What processes and contextual factors can help with mid-life crises of teachers ("burn-out," diminished enthusiasm and energy, identity crises)?

2. What are schools, colleges, and their programs doing about problems that teachers face in real life settings?

3. What are environmental, human, and curricular variables that are perceived by teachers as influences and/or pressures during the induction and inservice phases? How do they react to them?

D. What are the variety of instructional processes which can be employed in the education of teachers and to what extent are they currently employed?

1. How can various forms of feedback, self-confrontation, and organizational development approaches be used in the training of teachers? What do we know about giving feedback to adults that can be applied in teacher education?

2. What is the role of experiential learning in teacher education? What is and what would be learned experientially; i.e., by means other than conventional practicum/course experiences?

3. What do we know about the effectiveness of different instructional processes for achieving different outcomes (i.e., skill acquisition as opposed to developmental growth as opposed to concept formation as opposed to cross-cultural sensitivities)?

4. What are the managerial/organizational/logistical processes attendant to effective teacher education instruction in both the academic training and work-site settings?

E. How do teacher educators learn about the content or process of teacher education?

1. What skills are required of teacher educators in relation to different processes of teacher education?

2. What strategies will encourage teacher trainers to apply what is known through research about effective teaching and learning?

F. How can the process of teacher education be made integrated and continuous as opposed to segregated and discrete?

1. Do systematic changes in training programs yield differences in teachers over time (i.e., is there a residual effect of such training interventions)?

2. What are the relationships between and among teacher education processes in preservice, induction, staff development/inservice phases? For example what effects do different preservice environments have on induction?

3. What are the socialization processes that occur during preservice, induction, and inservice?

4. What student entry characteristics are positively related to success in training programs--in teaching on-the-job? What selection processes might improve the output (effective graduates) of preservice education?

5. What kinds and amounts of training can be done in the preservice time allotted? What minimal and optimal amounts to achieve specified outcomes?

6. Assuming that there should be an induction program for beginning teachers, what should be the objectives of the program and what are the effective processes for accomplishing these objectives?

7. What teaching procedures are most appropriate for instructing teachers in a professional development program on-the-job? To what extent do they differ from those common to traditional on-campus graduate courses?

8. What is the relationship of incentive structures of employing agencies to productivity of teachers (e.g., requirements for master's degree, salary advances)?

9. What are the interaction effects between or among content, process, purpose, and learner characteristics?

10. What are the relationships between/among teacher training, teacher effectiveness, teacher satisfaction, and the instructional characteristics of the classroom?

CONTEXT

> While criticism is continually directed at teacher educators about their lack of ability to teach "what is important" and their lack of imagination and their lack of scholarship, it is entirely possible that our hopes for improvement far exceed the realm of what is possible given the present level of investment. (unidentified)

The context of teacher education is so pervasive and undifferentiated that developing a clear grasp of the potential implications of research findings is extremely complex. As the various conference work groups emphasized, issues related to context are not going to be resolved for some time. Contextual issues range from those which are political, economic or cultural, to those related to internal forces upon schools and teacher training institutions. There are few clear-cut research findings and few conceptual theories to assist those in various aspects of the profession in understanding the influences of context. And, there is even less knowledge about how to manipulate contextual factors for specified outcomes.

In examining the pervasive issues, Lewis (1979) focused on political and economic realities. Factors related to collaboration, collective bargaining, legislatures, limitations on funding, as well as the difficulty of developing clear-cut research studies were addressed. Lewis also pointed out some of the

difficulties related to coordination of the resources and actors that are involved:

> In a period when resources available to us are stable or declining, it is imperative that we examine more closely our existing programs for ways to coordinate and interrelate them, for methods of using the experiences and knowledge of one to strengthen another . . . . Understanding what we have in the way of programs and funding sources for preservice and inservice training must be the first step in a concentrated effort to improve coordination.

Multicultural contextual issues must also be better understood. In this regard, Boyer (1979) pointed out:

> Concepts of multi-culturalism have had difficulty gaining both academic respectibility within teacher education and within the context of instructional delivery in public elementary and secondary schools . . . . The context of schooling today is characterized by realities which not only seem unfamiliar to the traditional teacher education researcher, but which reflect difficulty in declaring relationships essential to the thrust of multi-culturalism in American education.

For teacher education research, Boyer emphasized the following parameters:

> . . . the essentials of multi-culturalism in research include (1) new perspectives on research design, (2) broader thrust on teacher education research topics--to include topics which further analyze the institutions in which teachers are prepared, (3) continued theoretical constructs which tie the dimensions of our social/academic relationships together--employing the dynamics of school desegregation, curriculum desegregation, affirmative action, equal employment opportunities and like factors in the development of these theoretical constructs. There must also be serious research effort directed at the administrative/policy-making relationships which exist in teacher education contexts--and the impact of these relationships on subordinate level instruction and evaluation.

Institutions of higher education represent a unique context which needs further understanding. Nearly all preservice education takes place within that context. In addition, many induction and inservice experiences are directly influenced by the context of the institutions of higher education. In her examination of the university context, Carey (1979) proposed a framework based upon two dimensions:

> . . . two primary categories of information used to compare interactions and identify research questions are the contextual elements of operating universities and the program goals of a college. Contextual elements include all those considerations necessary in the business of operating an institution.

From looking at the various program goals and their intersectional contextual elements, a large list of questions can be identified; for many, there are neither theory nor research findings to be of assistance.

Wallace (1979) provided further amplification for an understanding of context from an analysis of variables that impact the school setting. He viewed the school as a complex social institution within which teaching and learning take place:

> It is held, further, that instructors and learners are influenced in some manner, directly or indirectly, by forces present within their local, state, and national environments. However, the manner in which these forces influence the school system and teachers or teacher educators is largely unknown. Thus, to formulate research efforts that will succeed in identifying the linkages that do exist among the contextual forces, teacher behavior and student learning outcomes will be a difficult task.

Wallace proposes that the analysis of the school context could be done by examination of three categories of factors: (1) external organizational influences, (2) social forces upon the school, and (3) internal forces:

> The problem of which social forces operating in the culture at large are most potent with respect to their influence on teachers, the teacher/learning process, student learning and teacher training is a speculative question at best and will likely remain so for some time. Until researchers, practitioners, and theorists are able to identify and agree upon specific and precisely defined variables and identify the functional relationships that exist among them, little progress can be made in the attempt to assess the pervasive influences of social forces in education.
>
> The lack of a comprehensive theory that would account for social force variables and their interactions in the school environment is a serious disadvantage.

Specific topics and questions for research on context are:

A. The need for theoretical and conceptual development.

1. Comprehensive conceptual models of the types, levels, and clusters of context variables are needed if research into their effects is to be systematic and cumulative.

2. What factors differ which are relatively common across schools and colleges? Which are relatively fixed; which are amenable to change? Can minimal and optimal contexts be defined and nominated for testing against multiple criteria?

3. To what extent does school context mirror community context? What are effects of congruence and discrepancy?

4. How can cultural backgrounds of students be conceptualized and studied as context variables?

5. How can preservice programs prepare teachers to adapt to the variety of contexts they may face in their careers?

B. What variables in the work setting are the most powerful determinates of teacher behavior?

1. To what extent can contextual elements which may affect learning and instruction be identified? To what extent are teacher educators knowledgeable in this regard?

2. What are the factors which cause schools to be perceived by teachers as "good places" to work or "good schools?"

3. What are the effects of teachers' movements to and from schools of different cultures?

4. What are the boundaries of heterogeneity in classrooms with which teachers can effectively work? How does this vary with increasing professional maturity?

5. What do teachers need to know about student background (e.g., cultural contexts, learning styles) in order to diagnose and teach most appropriately?

6. How is instruction best adapted to different public school students (cultural, ethnic, handicapped)?

7. What contextual factors are most salient with regard to learners? Which factors are systematically related to various student gain criteria?

C. In what ways does the place of the college of education within the university or college community and related factors (e.g., reward structures, prestige, autonomy, college organization, etc.) affect teacher educators and their programs?

1. Can a descriptive typology of schools of education be developed based on variability in the ways in which these schools are embedded in the contexts of universities and the ways they relate to external clinical groups?

2. What elements of the teacher education context are amenable to change and what elements are relatively fixed?

3. How can teachers be trained about stereotypes, biases, etc., so that they transfer knowledge and skills in recognizing and dealing with their perceptions and behaviors from one context to another?

4. Is it possible to change the nature of teacher preparation programs in the current context of institutions of higher education? How?

5. To what degree can preservice programs put preservice trainees into contact with elements of school contextual settings which are essential in early teaching experiences?

6. What alternatives exist to successfully develop authentic and relevant multicultural and multiethnic teacher education?

7. How well do teacher education programs mirror the perceived needs of public schools, and how do decisions about teacher education content/process get made?

8. To what extent do graduate programs on teacher education reflect the actual needs of teachers?

9. How do the different licensing criteria and procedures in different states affect a teacher education program and the characteristics of its teachers?

D. What can teacher education do to prepare teachers to function in and improve the context of schools in which they work? What should be the elements of such a program?

1. How can contextual conditions be used in solving problems? What are the manageable context effects and how can teachers stay within the phenomenology of these effects?

2. What kinds of delivery systems (content and process) are the most effective in training IHE and school system persons to deliver effective inservice training (both on campus and field-based)?

3. Do individuals and systems go through identifiable development stages in coping with existing and emergent context variables? Is that coping reactive or proactive?

E. What are the identifiable institutional characteristics that produce psychologically mature adults and successful classroom teachers at the entry level and beyond?

1. What specific contextual variables in the workplace (e.g., incentive structure, differentiated staffing, externally mandated programs, funding accountability demands, principal style, school climate, etc.) have greatest impact on teacher growth, effectiveness, and satisfaction at induction? At various career stages after induction?

2. How is the public demand for higher performance in schools perceived by teachers as relating to the specific expectations they hold for themselves and/or for administrators?

3. How can schools become differentiated so that there are more career opportunities for teachers?

F. The economics of teacher education.

1. What monies are actually spent on what in teacher education, and how do these investments compare with those of education in other comparable professional fields?

2. Who makes the financial policies, and what are the bases for the policy decisions?

G. How do context variables impinge upon teacher education research?

1. Do researchers who are ethnically congruent with research populations ask different questions and arrive at different results and conclusions than those who are incongruent?

2. What context variables (e.g., school policies, HEW regulations, and the political workings of the school system, etc.) affect the selection, operation (helps/hinders) and outcomes of a collaborative research plan?

PROFESSIONALS AS LEARNERS

The general consensus at the conference was that the knowledge about how adults learn is quite limited. Sprinthall (1979) noted:

> For a series of reasons, knowledge concerning the process of normal adult growth and development is in an infantile state. Theory and research in academic psychology has tended to focus on <u>normal</u> children and adolescents and <u>abnormal</u> adults. Thus we have elaborated theories on a compre-

> hensive series of developmental domains in children and teenagers-- carefully researched. Similarly in the area of adulthood we have an array of impressive clinical and empirical measures for indexing adult pathology. . . . When we turn, however, to adults in general, or adults in professions, we find a dearth of theory or research.

There does appear to be an emergence of theories and research in the recent literature on adult learning. Although the knowledge base is incomplete, there does seem to be increasing evidence that adults learn differently than do children. Implications of this for teacher education are many. One implication is that more descriptive research and theoretical synthesis are needed to develop more clearly the knowledge base about the characteristics of teachers and teacher educators as adult learners. Sprinthall urges that initial efforts focus on emergent developmental models of adult learning.

> . . . I strongly urge tryouts of a developmental model for adults even though all the answers are not yet in from basic research; further that tryout field based experiments themselves are basic research from a developmental perspective . . . . By carefully examining actual "best shot" practice we can more fully illuminate needed theoretical reformulations. Thus, although heretical, a basic developmental assumption is that the basic and the applied are not sequential but rather interactive.

Heath (1979) argued for viewing the development of teachers and teacher educators from the perspective of "psychological maturity." He also advocated viewing learning as a life-long process:

> To understand the continuing professional development of a teacher requires a model of how healthily functioning adults continue to grow throughout their occupational lives. Psychology, still overly preoccupied with children and adolescents, cannot yet provide such a general model.

Sullivan (1979) emphasized the importance of recognizing that teachers are learners who are caught in a complex array of demands and needs. For learning to occur, special attention must be given to these factors:

> The more we begin to understand adult learning, the more we must face the fact that our teachers are just that. Throwing them new materials,

> short-term workshops, pious teacher talks from experts or other technical gimmicks without accepting the fact they they are as complex and continuing learners as their students is simply short-sighted . . . . If we want good education for our children we must realize that that is a "human investment" rather than an investment in techniques.

Clearly, viewing the personal-professional development of teachers and teacher educators as a part of the teaching life cycle is important. What the processes, stages, and unique features are of adult learning are not that clear. The appropriate procedures for amplication of emergent research and theory to teacher education should be examined.

The following are some possible directions for research:

A. What is the knowledge base about adult learning and development? What are the implications for current practice in teacher education?

   1. What are the implicit and explicit theories of adult learning upon which teacher education is based? What data base exists to substantiate these concepts? What valid and reliable measures?

   2. How can we better conceptualize developmental stages of a teaching career in order to support systematic training, program development, and research?

   3. Are there differences in the way children and adults learn? What are the implications for the classroom?

   4. What is the relationship between teacher psychological maturity and classroom practice? Between psychological maturity and effectiveness in various contexts?

   5. What effect does a teacher's developmental level have on his/her ability to acquire professional competence during preparation? What effect does it have on survival in the classroom, job satisfaction, effective teaching, self-renewal, and student outcomes?

   6. Are there basic differences in effective learning processes and useful content at the various phases of teacher education-- preservice/induction/inservice? How does what teachers perceive as crises and peak learning experiences relate to what is known about adult development?

7. How could teacher education be improved based on present knowledge and theory about adult development?

8. What is the relationship between psychological maturity of teacher educators and psychological maturity achieved by the teachers they train?

B. Professional socialization--how and by whom are the "norms" and role conceptions of the teaching professional transmitted, maintained, and changed?

1. What is the nature of the professional socialization process that occurs when teachers enter and mature in the teaching profession?

2. How powerful is peer group influence in the professional socialization process for teachers and teacher educators at various career stages?

C. Personal characteristics--what personal-professional characteristics predict educability/trainability, professionalism, training effectiveness, satisfaction, and longevity at various stages in the teaching life cycle?

1. Synthesis of the knowledge base and continued research are necessary to identify predictors/indicators/bases for determining what individuals: (a) should enter into teacher preparation programs; (b) be initially certified; (c) merit continuing certification; (d) be reassigned to new settings or roles.

2. What relationships currently exist between criteria employed in admission to preservice training, certification, school hiring practices, inservice evaluation systems, and the research evidence related to these criteria?

3. What are the personal, social, and academic qualitications of students who enter teacher preparation programs? What are the relationships among these characteristics and successful completion of the teacher education program . . . and success of teachers some years later?

4. What are the characteristics of the self-renewing professional? How can these characteristics be identified, fostered?

5. What is the etiology of teachers who become conformists versus change agents in schools?

6. Why do teachers leave the classroom? What leads to their exodus to other educational roles or other fields?

7. What are the conditions and problems that lead toward burnout and early retirement? Are there identifiable crises throughout the career life cycle, particularly the almost unstudied mid-life crises?

8. Are there events or institutional characteristics that contribute to enhancing the psychological maturity of teachers and encourages them to remain as classroom teachers?

COLLABORATION

Collaboration is another issue where the research and knowledge base is both limited and not clearly synthesized. Many topics urgently need to be addressed in an exploratory fashion, such as description of models that are presently in practice and the development of typologies and theories. We not only need more detailed and in-depth descriptions of the different types of cooperative effort in action (such as the observation/documentation of the governance structure in the Urban/Rural School Development projects), but also more information on the pre-conditions, such as the contextual variables which enable (or constrain) what eventually transpires. Models need to be developed describing both individual and institutional forms of cooperation, with respect to both teacher education and related research. There is need for a typology or schema which classifies such facets of collaboration as process, purpose, and degree of cooperation.

In describing present collaborative practice, Houston (1979) made the following observations:

> First, collaboration reflects and is embedded in a trend in American education that assumes that groups of institutions, agencies, and community representatives are more effective in solving the complex problems of American education than if independent and unilateral actions are taken. . . . The second observation about collaboration is that it is a relatively recent term when used in a positive sense . . . . Third, the concept of collaboration is derived from political and philosophical assump-

> tions relative to parity and involvement of clients in the decisioning process . . . . Fourth, the paucity of research on collaboration is astounding. The literature is filled with case studies and observations. Many describe conditions, designs, and dreams. Very few even attempt to analyze their operations. Almost no consideration has been given to the study of cost-effectiveness, procedures for improving operation, testing the validity of basic assumptions undergirding the concept itself, or impact of collaborative efforts on the institutions represented.

Based upon his analysis of the issues facing the field, Bush (1979) proposed a specific focus for further study of collaboration:

> The central proposition to which I invite your attention for discussion at this meeting is for all of us to collaborate and focus our attention not on preservice or inservice teacher education, but on the transition period between the two, in the first few years (3-5) when new teachers begin their practice--a highly teachable moment.

From a practitioner's perspective, Kennedy (1979) noted:

> The variety of ways in which teachers can participate in research is multidimensional and multi-faceted. Implicit here is the notion that collaboration is a dynamic, rather than a static process and teachers assume roles which are congruent with the mode of inquiry. Four teacher collaboration roles have been identified. Model: The professional performance of a teacher is observed in a classroom by the researcher. . . . Model/Participant: Professional performance of a teacher is observed in the classroom . . . . Data Collector: The teacher collects classroom data or otherwise documents some aspects of classroom activity. . . . Co-Investigator: . . . The teacher assists in formulating research questions, in planning for data collection and . . . interpreting results.

In describing recent research involving a collaborative model of research (Interactive R&D on Teaching: IR&DT), Tikunoff, Ward, and Lazar (1979) emphasized the potential of a collaborative effort:

> . . . if there is one powerful notion which has emerged from implementing IR&DT, it is the importance of viewing collaboration as teachers, researchers, and trainer/developers working with parity and assuming equal responsibility to identify, inquire into, and resolve problems/concerns of classroom teachers.

The work that already has been done within the IR&DT model demonstrates the impact of collaboration for contributing to research and practice. Tikunoff, Ward, and Lazar state:

Just as linear thinking has no doubt contributed to operationalizing a linear r&d model, this same phenomenon probably accounts for the artificial separation that exists between r&d activities and teaching, between preservice and inservice education for teachers, and between the process of teaching itself and inquiring into and understanding teaching. Considerable rethinking of the structure of current preservice and inservice teacher education programs would seem to be in order if the IR&DT strategy were to be used.

Clearly, there are a great number of questions that need to be examined relative to collaboration and research in teacher education. How do we involve the various role groups in designing and conducting teacher education research, and what are the effects of this involvement? The "Why's" and "What's" also need to be explored. Attention must be given to the design of delivery systems that practitioners not only can accept, but also will utilize.

The following more specific questions about collaboration were identified:

A. What are necessary conditions under which collaborative efforts can be effective? What conditions would maximize usefulness of collaborative research, at what contextual levels?

   1. When collaboration "works," why? What are the structural, contextual and logistical conditions necessary for collaboration to take place? To be effective?

   2. Are there identifiable stages in a collaborative process (e.g., from structuring to congealing)?

   3. What kinds of role differentiation and role enactments are required of participants by different types, levels, or stages of collaboration?

   4. What skills are essential for collaborators? How are they developed?

   5. Can a typology of different and effective collaborative styles (institutional and research) be developed?

   6. What are characteristics of effective teams for different types of outcomes and in different settings?

7. In what manner can classroom teachers, teacher trainees, and other role groups best be involved in collaborative research?

8. How can more collaboration be promoted between educational researchers and researchers from other disciplines?

B. How feasible is collaboration? Collaboration sounds good, democratic, and otherwise virtuous, but what are the necessary conditions to support various types and levels, for what purposes, and at what cost-benefit ratio?

1. What are the costs and benefits of collaboration? Are funding agencies willing to bear the costs of collaborative research?

2. Is collaboration valuable for its own sake, or can it improve teacher education, make research more productive, etc.?

3. For what type of question, problem, purpose are collaborative efforts essential, appropriate, mandated, expected, worthwhile?

4. How and why is collaboration related to the validity of research conclusions?

5. What has been discovered through collaborative efforts that has not previously been discovered through more conventional (i.e., non-collaborative) efforts of inquiry?

C. What type and level of collaboration is optimal for the design and conduct of teacher education/staff development programs? Of teacher education research?

1. How can future research be enlightened by analysis and synthesis of available documentation of previous and present collaboration efforts in teacher education and related fields?

2. What types of teacher education research problems lend themselves best to what types and levels of collaboration?

3. If teachers are to be collaborative partners in research, how can they be trained/supported in generating researchable questions attractive to researchers?

D. Teacher collaboration with other partners inherent in the work of a teacher is collaboration with many adults in different role groups. What are the characteristics, conditions, and strategies for these different collaborative models?

1. What education is important for teachers and teacher educators to have in order for them to successfully interact with adults in different role groups?

2. How do teachers and teacher educators work with or give feedback to adults in other role groups? For example, how do teachers work with parents to build support for schooling?

3. How do teachers and teacher educators develop and utilize leadership skills in relation to their participation in collaborative efforts?

RESEARCH METHODOLOGY

Research on teacher education is clearly limited by the present state of knowledge and practice in methodology. The presentations and discussion at the conference reflected the increased awareness of qualitative approaches and increased sophistication available in quantitative approaches. Research needs and new directions in research design received intensive examination both in the prepared papers and in the discussions.

In viewing research methodologies, Koehler (1979) proposed a new approach:

> A possibly more useful approach to analysis of research methodologies may be to view conceptions of research--purposes, types of questions asked, intellectual interests, etc.-- and to determine how methodologies are related to various elements of these conceptions . . . . Two categories of conceptions of research are "descriptive" and "improvement" research. The primary difference between these two conceptions lies in the type of research questions being asked . . . . The purpose of improvement research is to produce findings which will be of direct use to educators who are attempting to improve educational practice . . . . The purpose of a descriptive study is to make sense of (understand) or produce knowledge about a phenomenon.

Clearly, the two conceptions would result in studies of different design. The findings from both would have implications for further research, as well as for practice. Given the present degree of sophistication and the problems faced by researchers, it is clear that both approaches are needed. Each, however, has different limitations. Schalock (1979) pointed out:

> There is a growing awareness of the limitations inherent in large sample, cross-sectional studies that aggregate effects to class or school means. There also is a growing awareness of the limitations of looking for treatment effects of single variables within the school setting, even when these "variables" are conceived as broadly as teacher or curriculum effects. There also is growing awareness of the limitations inherent in looking at single outcome or dependent measures, especially when the focus of a research study is on something as complex as the consequences of classroom instruction or schooling on children's attitudes and achievement. Finally, there is a growing awareness that looking only at teacher and student behavior in studies of teaching and teacher education is not enough.

Doyle (1979) argues for two main categories of needed inquiry:

> (1) research on classroom knowledge; and (2) research on ways of teaching classroom understandings to beginning teachers.

Doyle further emphasizes:

> It is important to emphasize that empirical studies of classroom knowledge must be accompanied by rigorous conceptual analysis and theory construction.

Given the present understanding of research methodologies and present research practice that is underway in teacher education, Schalock concluded:

> I have come to the opinion that we have a very limited knowledge base about teacher education per se, and that we are essentially without tradition when it comes to teacher education research . . . . Within recent years educational researchers have begun to establish a knowledge base that pertains directly to teaching, but as yet very little information that informs decisions by teacher educators about teacher education has come from research on teacher education.

Schalock came to these conclusions based upon analysis of the problems that are faced in teacher education and recent insights into the complexity of these problems:

> My remarks are based on the assumption that the methodological issues facing researchers in teacher education are infinitely more complex than was once imagined, and that at present we do not have either the concepts or the methods needed to implement a full-scale program of research in all areas . . . . If this assumption is true research on substantive issues will need to be paralleled by research on methodology . . . . We do not now have well established methodology to support much of the research that needs to be done in teacher education. This is especially

the case with respect to measurement systems and the conceptual frameworks on which they are based.

Extensive research has been ongoing in the areas of teacher effects or classroom research and, increasingly, the evaluation of teacher education programs. In reporting on these attempts, Cooper (1979) reinforced the concerns of Schalock and identified some further issues:

> Most teacher education faculty have had little experience conceptualizing how one evaluates a teacher education program, what variables are involved, what data to gather, what instruments to use to collect the data, and how evaluation efforts may best be used to guide program improvement. Furthermore, financial support for actual research work has been extremely scarce.

Cooper went on to advocate the following needs as critical:

> 1. Both conceptual and operational models for evaluating teacher education programs are needed . . . .
> 2. Research questions must be identified that evaluation data from operating teacher education programs can help to answer . . . .
> 3. Evaluation and research efforts are likely to have much greater payoff if some coordination and collaboration occurs among the institutions conducting studies . . . .
> 4. Inservice teacher education must be included in these evaluation and research efforts . . . .
> 5. As is always the case, funds need to be made available to carry out the research and development efforts described . . . .

Schalock (1979) adds a further recommendation:

> . . . for teacher education research to make an appreciable difference in the manner in which teachers are selected and prepared in institutions across the nation multiple sites must be engaged in both hypothesis formulating and hypothesis testing studies . . . . in order to make a difference these studies will need to be longitudinal in nature, reflect a high degree of external validity and be subject to numerous replications.

The methodological problems and issues faced by teacher education research and evaluation are many. However, there have been promising breakthroughs in recent years in relation to tools, instruments, and in the clarification of crucial questions to make the confrontation of issues more viable

now than in the past. Further, it is clear that both improvement and descriptive research must be going on concurrently.

There is also increasing evidence that teacher education research must be done with both short-term and long-term designs. In addition, studies must reflect that the phenomena being grappled with are multi-variate. They cannot simply examine single cause and effect relationships or simple correlations. Further, the need for a distinction discussed earlier between research on teacher education and research on teaching needs to be kept in mind. Clearly, a great deal has been learned from the latter, which has implications for research on teacher education and for teacher education practice. However, it is research of a different, but complementary nature and should be seen as a companion rather than a substitute for research on teacher education.

During the conference, questions were raised about research methodology and its application to teacher education:

A. Research methodology questions:

1. Are there research methodologies in other professions which can inform us about research in teacher education?

2. What reserch designs are needed and which should be used to conduct research and training in teacher education?

3. What are the criteria that will inform decisions about the interaction (interdependence) of problem focus, kind of information needed, and methodology?

4. What unique or integrated contribution can descriptive research make to teacher education improvement?

5. How can fragmentation of research efforts be combated?

B. The actors in teacher education research:

1. Who makes the decisions about research in education? Should there be some more systematic method for decision-making?

2. What are the attitudes and characteristics one must know about teachers/teaching/learning before we can build a model for research on teacher education and teaching?

3. What are the different kinds of research questions that are meaningful and useful to the various groups--basic, applied, action, improvement, descriptive?

4. What are the necessary conditions for teacher education faculty to engage in teacher education research?

C. Some substantive questions:

1. How do we synthesize the knowledge base (that relates to teacher education); how do we draw conceptual maps which provide a common language for the use of a knowledge base in research?

2. What is required for research to better differentiate program component effects and total program effects?

3. How is the above question complicated by the fact that the components of some programs are heavily integrated, while some are clearly relatively disconnected segments?

CHANGE/DISSEMINATION

Change and dissemination in teacher education is one of the least understood areas in the field. It has a limited body of formally developed knowledge. Presenters and participants at the conference analyzed issues in this area from several perspectives.

Lieberman (1979) focused upon school improvement by viewing the school as a social system rather than by focusing on individual teachers. She also pointed out that little, if any, of the literature on processes of school improvement is addressed to teacher education programs. Among her list of problems for both research and practice are the following:

1. The bias of the literature we teach in teacher education institutions is still heavily weighted on the psychological and the individual. This has not been helpful to our understanding of schools . . . .

3. Working in the field is still held in low esteem . . . . [some] functions are clearly legitimate, but can teacher education institutions change their reward structure to allow such involvement?
4. With aging faculties and stable staffs, the whole area of staff development becomes an increasingly important set of activities . . . .
5. Will teacher education institutions be flexible enough to engage in field research? . . .
8. The Pre-In-Service continuum remains a theoretical construct . . . . Longitudinal studies have rarely been done on a set of teachers.
9. . . . [there is] tremendous isolation of all the constituent groups and [there is tremendous felt need to know more about research]. Who should do this? . . . How do we get information flowing from schools to research establishments and back to schools?

Emrick (1979) explored the present body of knowledge about change that has addressed school improvement. A great deal of research has been done in the last several years on the change process in schools and the dissemination of new information and its impact upon school practice. Key findings from this research include:

1. Meaningful change occurs as a process, not as an event.
2. Directed personal intervention is by far the most potent technical support resource, and may be a necessary condition for many forms of utilization.
3. Continuous personal participation of the implementing staff is needed to firmly root and sustain the utilization.
4. Administrators occupy a crucial role in supporting the utilization process.
5. Comprehensive materials, resources at a "how to" level appear necessary, particularly for utilizations involving organizational or instructional change.

Emrick then pointed out that parallel research has not been done to examine the change process in higher education or teacher education, at least at the comprehensive and broad-base level that has been done in schools. In addition, there are not the formal dissemination strategies in place to provide the linkage between research knowledge and teacher educators. At present, there are not Capacity-Building projects, National Diffusion Networks, or other dissemination strategies to assist teacher educators in becoming aware of or skilled in using the recent results of research. There also does not

appear to be very much research-based knowledge in teacher education to disseminate.

Based upon his experiences in building a national network of institutions of higher education for dissemination of resources and practices for mainstreaming, Reynolds (1979) made the following observations:

> . . . there are no adequate arrangements for the necessary time, resources, or incentives for the teacher education job that seems to be required. Somehow, we have never negotiated successfully for the essential resources to conduct either the preservice or inservice education of teachers. Furthermore, the college professors who might be called upon to help in the training are not usually competent in these emerging areas. How many teacher educators are expert in new measurement systems for teaching individuals? in consultation practice? or in parent counseling?

Clearly, change is and will continue to be a regular attribute of the practice of schooling and of teacher education. It appears that at the present time, much more is understood about the improvement process and the dissemination of new knowledge to practitioners at the school level than is understood about knowledge creation and dissemination in relation to the products and practices of teacher education at other institutional levels. Further, within the institution of higher education there would seem to be additional problems in relation to the design and implementation of new practices. Not only has change within institutions of higher education been less extensively studied than in schools, but also there are fewer formal mechanisms for the dissemination of information among teacher education practitioners.

During the conference, the following priority questions were raised:

A. Research in the improvement of practice.

   1. To what extent is teacher education/staff development program effectiveness a product of institutionalization (stability) versus continuous change?

2. Since neither extreme of practice (rigidity versus chaos) appears desirable, can optimal balance be defined and taken into account in change efforts?

3. While it is popular to favor improvement in teacher education, what is the actual state of receptivity and desire for change and of what kinds among various constituencies?

4. What more effective strategies exist or are needed to facilitate the change process and to institutionalize desirable innovations?

5. Does greater impact of research upon practice depend upon basic reconsideration (and study of differential effectiveness) of different kinds of "packaging" of research-based information for different teacher education audiences?

6. Assuming that there is a paucity of teacher education research, how can greater resources and capability be developed? If college-based and school-based teacher educators by their experience represent potential capabilities, what are the necessary conditions for promoting their interests, preparation, and engagement in needed research?

B. Teacher education as a primary discipline.

1. How can the isolation (geographic, financial, and professional) in teacher education be reduced?

2. How is it possible to increase the linkage or develop a network of teacher educators in research and practice?

3. Who are the different teacher education audiences? Who will receive the products of teacher education research?

C. Linking teacher education research and development outcomes with teacher educators.

1. How are research findings disseminated in the area of teacher education so that they will be accepted and utilized by all pertinent parties?

2. To what extent are teacher educators informed as to the contextual elements which may affect learning and instruction? Which of these elements are, in fact, critical forces for concern?

3. To what extent does teacher education practice reflect what is in the research knowledge base? Why? Do teacher educators access research and development outcomes? How?

4. What are possible roles of research in informing teacher educators about what is successful practice? How do you engage teacher educators in research-based development?

5. How do teacher educators keep in touch, if they do, with practice and other related activities?

6. What mechanisms could be effective in linking teacher educators with new knowledge?

PART IV
CONCLUDING COMMENTARY

As has been demonstrated clearly in the wealth of material that is summarized in this report, a tremendous amount of energy and professional commitment is available in regard to research in teacher education. Many of the questions and topic areas overlap. At the same time, there are clear-cut themes which the community as a whole recognize as priorities for research.

The overriding directions and issues include the need for pluralism in terms of membership in teacher education research activities; and multidimensional topics, methodologies, institutions, role groups, and conceptual models for research. In very few areas of teacher education are there solid empirical findings or coherent concepts and theories to guide future research efforts. There is definite need for description, analysis, exploration, mapping, and theory-building. In some areas, such as research on teaching, there is knowledge that has been under-utilized in both research and practice (see Appendix E). In nearly all areas, criteria for effectiveness and quality are not available. In addressing the proposed questions, definitions of the criteria will need early and careful attention.

One observation noted in passing by several participants is worth repeating. It appears that most individuals whose roles and responsibilities are in teacher education do not identify the teacher education field as the primary discipline with which they are professionally affiliated. Rather, they may be associated with some subject matter area or some aspect of schooling, but not with the profession as a whole. If teacher education and teacher education research are to effectively perform the job expected, it is imperative that

the discipline of teacher education emerge with an identity that its members, both individuals and institutions, will own and with which they will give primary allegiance.

The delivery of high quality, research-based teacher education that is relevant to the real world will not be accomplished with one conference to analyze research priorities or by a few selected studies. Public and professional awareness that teacher education is a priority field must be facilitated. We must learn from other disciplines. What is discovered from research must be considered in building future research efforts and, whenever possible, for improving practice. With gradual increases in facilitation, coordination, and capacity, and the development of strategies for dissemination of research outcomes, the future of teacher education can be bright. Much of its tremendous potential can be realized and its responsibilities fulfilled. However, if teacher education research is left in its present underdeveloped, uncoordinated and uncatalyzed state, then we can hold little hope for improving the quality of teacher education and, ultimately, schooling.

It seems fitting to conclude with the final commentary of B. O. Smith's (1979) paper:

> Ten years ago I wrote "Teacher education is at a critical point in its history. There is now enough knowledge and experience to reform it, to plan a basic program of teacher education for an open society in a time of upheaval. But if this knowledge and experience are dissipated in prolonged discussions of issues, doctrines, and tenets leading only to more dialogue, instead of a fundamental program of education for the nation's teachers, teacher education is likely to fragment and its pieces drift in all directions." It is later, I fear, than we think.

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Brown, G. B., Hall, G. E., & Hord, S. M. (Eds.). Exploring issues in teacher education: Questions for future research. Austin: Research and Development Center for Teacher Education, The University of Texas, 1979.

APPENDIX A

List of
Presenters, Discussants, and Chairs

Presenters, Discussants, and Chairs
for the Conference:

Exploring Issues in Teacher Education:
Questions for Future Research
January 10-12, 1979

CONTENT

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RESEARCH METHODOLOGY

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APPENDIX B

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Questions for Future Research
January 10-12, 1979

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APPENDIX C

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Bibliography of Discussants

Bibliography of Papers Presented at
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Exploring Issues in Teacher Education:
Questions for Future Research
January 10-12, 1979

Research and Development Center for Teacher Education
The University of Texas at Austin

Boyer, J. B. The essentials of multi-culturalism in the content of teacher education research. A projective overview. Presented at the Context Session.

Bush, R. N. A new source of energy for teacher education: Collaboration. Presented at the Collaboration Session.

Carey, L. M. A framework for identifying future research questions related to teacher education in the university context. Presented at the Context Session.

Cooper, J. M. Improving teacher education program evaluation. Presented at the Research Methodology Session.

Dillon-Peterson, E. A. Process and inservice education. Presented at the Process Session.

Doyle, W. Research on teaching in classroom environments. Presented at the Research Methodology Session.

Emrick, J. A. Some implications of recent research on educational dissemination and change for teacher education (inservice) programs. Presented at the Change/Dissemination Session.

Feiman, S. Growth and reflection as aims in teacher education directions for research. Presented at the Process Session.

Fenstermacher, G. D. What needs to be known about what teachers need to know? Presented at the Content Session.

Good, T. L. Research on teaching. Presented at the Content Session.

Heath, D. H. Toward teaching as a self-renewing calling. Presented at the Professionals as Learners Session.

Houston, W. R. Collaboration -- see "treason." Presented at the Collaboration Session.

Kennedy, G. C. Collaborative inquiry: A practitioner's perspective. Presented at the Collaboration Session.

Koehler, V. Methodology for research on teaching training. Presented at the Research Methodology Session.

Lewis, C. A discussion of political and economic realities impacting upon teacher education research. Presented at the Context Session.

Lieberman, A. Describers and improvers: People, processes and problems. Presented at the Change/Dissemination Session.

Pratt, H. Selecting content for inservice education programs. Presented at the Content Session.

Reynolds, M. C. Networks of teacher educators: An approach to public law 94-142. Presented at the Change/Dissemination Session.

Ryan, K. Inside the black boxes: The process of teacher education. Presented at the Process Session.

Schalock, H. D. Eating humble pie: Notes on methodology in teacher education research. Presented at the Research Methodology Session.

Smith, B. O. On the content of teacher education. Presented at the Content Session.

Sprinthall, N. A. Adults as learners: A developmental perspective. Presented at the Professionals as Learners Session.

Sullivan, E. V., & Taylor, M. Teacher training: A necessity, not a frill. Presented at the Professionals as Learners Session.

Tikunoff, W. J., Ward, B. A., & Lazar, C. Partners: Teachers, researchers, trainer/developers--An interactive approach to teacher education r&d. Presented at the Collaboration Session.

Tisher, R. P. Teacher induction: An aspect of the education and professional development of teachers. Presented at the Process Session.

Wallace, R. C., Jr. The influence of selected context variables on schooling. Presented at the Context Session.

Bibliography of Discussant Remarks Presented at the Invitational Conference:

Exploring Issues in Teacher Education: Questions for Future Research
January 10-12, 1979

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Bettis, T. Discussant remarks, process. Presented at the Process Session.

Brickley, R. R. Change/dissemination, remarks of Richard R. Brickley, discussant. Presented at the Change/Dissemination Session.

Gage, N. L. Remarks as discussant at the University of Texas conference on teacher education. Presented at the Research Methodology Session.

Holley, F. Discussion: Research methodology. Presented at the Research Methodology Session.

Howey, K. R. Reactions to the panel on the content of teacher education. Presented at the Content Session.

Howsam, R. B. Discussant remarks, professionals as learners. Presented at the Professionals as Learners Session.

Lanier, J. Collaboration session, discussant remarks. Presented at the Collaboration Session.

Melle, M. A change agent looks at adult development: Discussant's reactions to papers presented on the topic "professionals as learners." Presented at the Professionals as Learners Session.

Olivarez, R. D. Change/dissemination component session, special discussant comments. Presented at the Change/Dissemination Session.

Phelps, V. Discussant remarks, collaboration. Presented at the Collaboration Session.

Ruch, C. Content of teacher education: Next steps on the research agenda. Presented at the Content Session.

Sandefur, J. T. Context discussant paper. Presented at the Context Session.

San Jose, C. A practitioner's questions about the process of teacher education. Presented at the Process Session.

Stallings, J. A discussant's remarks on two papers on context. Presented at the Context Session.

APPENDIX D

Criteria for Selection of Research Priorities

Criteria for Selection of Research Priorities

A more specific set of criteria for the selection of research studies in teacher education is proposed in this section. These criteria deal with the selection of specific studies and the development of an interrelated set which will lead to a programmatic research thrust. These criteria are teacher education focused, but are representative of criteria that would be useful in the design of studies in other areas. It is proposed that these criteria be considered in the development of requests for proposals, review of any proposed teacher education research, and in setting directions for research. The criteria are:

1. The proposed research must examine teacher education directly or justify how the proposed area of study is related to it.

2. The offeror(s) must identify the type of research (i.e., descriptive or improvement) and justify the choice on the basis of its potential contribution to the knowledge base and/or its implications for the improvement of practice.

3. The research must be compatible with a teacher education issue of present or (likely) future importance.

4. The research design must be of sufficient appropriateness and quality to ensure reasonable probability of successfully addressing the question.

5. The proposed research must reflect a knowledge of the existing research literature in the field.

7. The research should be able to complement other research studies that are underway so that there can be a compounding of the knowledge when the findings of each study are combined.

8. Proposed staff members should possess the necessary technical and experiential qualifications.

9. The organization/management structure needs to include adequate time lines and delineation of the functional responsibilities of staff.

10. Plans for utilization of the results by appropriate audiences need to be described.

APPENDIX E

Application and Extension of Research on Teaching

Research on Teaching, "A Special Case"

One area of educational research where there is a recently established and synthesized knowledge base is that of teaching. For the last several years, a critical mass of researchers have been working interactively and intensively to develop a clearer understanding of the teaching/learning process as it relates to achievement in the basic skills. The outcomes of this research include such concepts as direct teaching, active learning time, and a better understanding of the interrelationships between teacher behaviors and child learning within the contexts of different kinds of classrooms.

Research on teaching represents one area where the research knowledge base is existent, but it has failed to have significant impact on teacher education practice. How can this knowledge base be transferred to and used by practicing teacher educators? What are the mechanisms for accomplishing the translation of research knowledge into teacher education practice? A test case could be studied using the recent findings from research on teaching.

Clearly, more needs to be done in the area of research on teaching. However, much has been learned already which can have immediate implications for teacher education practice. For example, what are the implications of the direct instruction model for teacher education? It is also clear that the research methodologies used in teaching research have meaning and might be transferable to research on teacher education. How much do the criteria for effective teaching overlap the criteria for effective teacher education? What should be included in teacher education program content as a result of what has been learned in the research on teaching studies?

The following set of questions could be the focus for addressing some of these issues, capitalizing upon the knowledge base that has been established. The second half of the questions that are listed below are not suggested for direct research on teacher education, but, rather, as questions for the future directions of research on teaching that are of particular interest to teacher eductors.

A. Teacher education program or component variables [what kinds of training programs (components) have what kinds of effects on what kinds of teachers; and, what kinds of effects do these different training effects have on their students?]

   1. What are the differential effects on teaching of generalistic (elementary) training versus semi-specialist (secondary) training? Academic versus professional programs? Programs with more versus peripheral multicultural emphasis?

   2. Can programs be identified that consistently produce superior teachers? What are the common and unique program features?

   3. What are the relative (synergistic or conflicting or unrelated) effects of specific components of any teacher training program?

B. Teacher/teaching variables

1. What are the demonstrable relationships between what teachers know and how they teach?

2. What are the differential effects of different teaching methodologies (e.g., direct versus indirect, inductive versus deductive, etc.) in different areas of subject matter at different grade levels?

3. What is the effect of different levels of teacher interest and knowledge in a given subject matter on teacher behavior and student motivation and learning?

4. What teacher entry characteristics are related to openness to further learning and teaching effectiveness?

5. What is the effect of teacher values on student learning and development?

Extensions of Research on Teaching

A. Target population variables (most teacher effects research has focused on early elementary teachers and students).

1. The direct teaching model is clearly enough defined and measurable: it is time to test it at other grade levels and with other outcome measures.

2. Extend teacher effects research to learners beyond the K-3 level (including secondary and college) and to all subject areas.

3. Focus teacher effects research on populations of disruptive youth; ethnically, culturally, and physically different students; and other student "types" who may require essential adaptation of instruction for optimal learning of different kinds.

4. Extend teacher effects research to college level teacher educators and inservice trainers.

B. Criterion variables

1. There are other important criteria besides achievement tests. What are they and how can they be measured?

2. Extend teacher effects research to include multiple criteria of desirable educational outcomes.

3. Study appropriate long-range as well as more immediate effects of teachers using multiple criteria. (For example, to what degree and how should preservice programs be accountable for pupil learning in the classrooms of their graduates?)